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ABSTRACT

Intended for teachers and administrators, this document provides an annotated bibliography of research since 1960 that deals with effects of grouping elementary school students, below the junior high level, according to their ability. The 34 annotations are arranged in three categories: research concerned with the effects of ability grouping on students' (1) academic achievement, (2) affective development, and (3) academic achievement and affective development. Within each category, studies focusing on interclass ability grouping are presented first; studies dealing with intraclass grouping second. The majority of the studies concern interclass ability grouping. Since intraclass ability grouping, especially in reading, is so widespread in American elementary classrooms, representative reading studies are included. Findings are summarized in a five-page discussion. The research indicated that high-ability groups benefit and low-ability groups are hindered by interclass ability grouping. Most researchers concluded that interclass ability grouping is a questionable instructional practice. Researchers supported intraclass ability grouping, but identified potential negative effects on learning outcomes. Findings regarding effects of within-class ability grouping on students' affective development were inconclusive. (RH)

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AN ANNOTATED BIBLIOGRAPHY OF THE LITERATURE DEALING WITH GROUPING PUPILS BY ABILITY IN ELEMENTARY CLASSES

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INTRODUCTION

> A primary aim of public schooling in the United States is to provide opportunities for all students to develop their maximum potential as individuals and members of society. Related to this aim is the sometimes contradictory goal of equality of educational opportunity--that is, that all students be given the same or equal opportunities for educational attainment. The problem of grouping students for instructional purposes, when seen in relationship to these goals, is one of considerable significance for educational researchers and practitioners. (Hallinan, 1984, p. 229)

One such method of grouping students for instructional purposes, referred to by Hallinan, is ability grouping. Ability grouping, according to the Encyclopedia of Educational Research (1982), is a type of homogeneous grouping in which students within a given grade level are organized into groups for instructional purposes. Group assignments are made according to teachers' judgments of achievement and ability, results of intelligence and achievement tests, or a combination of both teacher judgment and test results (p. 266). The two types of ability grouping most often found at the elementary level are interclass, where children are assigned to classrooms according to their ability, and intraclass, where children are assigned to heterogeneous classrooms and then organized into

ability groups within the classroom (Haskins, Walden and Ramen, 1983, pp. 865-66).

Ability grouping has been a source of controversy and debate since it was first introduced into American school systems at the turn of the century (Kulik and Kulik, 1982, p.619). The practice of ability grouping declined in the 1940's and 1950's, but with the launching of the first Sputnik and the renewed interest in and concern for American education, the question of ability grouping once again has become a key issue among educators (Mann, 1960; Winn and Wilson, 1983). Supporters of ability grouping state that students who are in the same ability groups are easier to teach and learn more since instruction is "aimed" at their level. On the other hand, opponents of ability grouping claim that grouping by ability does not produce better learning outcomes; moreover, it places a "stigma" on those students who are in the low groups (Kulik and Kulik, 1982, p. 619). Consequently, researchers in general have attempted to determine both positive and negative effects of ability grouping on students' academic achievement and affective development.

STATEMENT OF THE PROBLEM

Despite the controversy surrounding ability grouping, it continues to be a widespread practice throughout American school districts (Esposito, 1973; Riccio, 1985). Moreover, in a survey of teacher attitudes toward ability grouping,

taken at an elementary education conference at the University of Northern Iowa, it was found that 92% of the sample of teachers questioned favored ability grouping, but that 66% were not familiar with research on ability grouping (Wilson and Schmits, 1978).

Teachers and administrators should be aware of what researchers are finding and reporting about the effects of ability grouping on elementary students. Furthermore, they should take these findings into consideration when making decisions concerning ability grouping in their schools and classrooms.

PURPOSE OF THE STUDY

It is the purpose of this study to present an annotated bibiography of research literature which deals with the positive and negative effects of ability grouping elementary school children. The literature reviewed will be useful to teachers and administrators who are faced with making decisions concerning ability grouping within schools or within individual classrooms. It will also help teachers identify those factors which negatively affect students in ability grouped classrooms and provide suggestions for minimizing those negative effects.

ORGANIZATION OF THE STUDY

Annotations are arranged according to the following three categories:

1. Research concerned with the effects of ability grouping on students' academic achievement.
2. Research concerned with the effects of ability grouping on students' affective development.
3. Research concerned with the effects of ability grouping on both academic achievement and affective development of students.

Within each area, studies which focus on interclass ability grouping will be presented first, followed by studies dealing with intraclass ability grouping.

LIMITATIONS OF THE STUDY

This study is limited to the practice of ability grouping in the elementary schools and does not include tracking in junior and senior highschools. In addition, the research reported is representative of that which occurred during and after the 1960's to the present. For a review of research prior to 1960, see Borg's Ability Grouping in the Public Schools (1966, pp. 12-13).

The majority of the research presented in this study deals with interclass ability grouping, since the number of intraclass studies is limited (Weinstein, 1975; Dreeben, 1984). However, since intraclass ability grouping is so widespread in American elementary classrooms, especially in the area of reading (Weinstein, 1975; Hiebert, 1983), representative studies in this area have been included.

Finally, this study does not include information concerning the legal implications of ability grouping. For a review of court cases involving tracking and ability grouping, see John N. Drowatzky's "Tracking and Ability Grouping in Education" (1981) and Jeannie Oakes' "Tracking and Ability Grouping in American Schools: Some Constitutional Questions" (1983).

GLOSSARY

ability grouping -- grouping of pupils within classes or schools on the basis of some measured mental ability. (Good, 1973, p. 269)

academic achievement -- knowledge attained or skills developed in the school subjects, usually designated by test scores or by marks assigned by teachers, or by both. (Good, 1973, p. 7)

affective domain -- one of three broad types of learning categorized by Benjamin Bloom and comprised of behaviors and processes that reflect feelings, emotions, attitudes, appreciations, and adjustments. (Dejnozka, 1982, p. 16)

heterogeneous grouping -- the classification of pupils for the purpose of forming certain groups having a high degree of dissimilarity. (Good 1973, p. 269)

homogeneous grouping -- the classification of pupils for the purpose of forming instructional groups having a relatively high degree of similarity in regard to certain factors that affect learning. (Good 1973, p. 269)

interclass ability grouping -- the assignment of children to classrooms on the basis of ability as measured by IQ score, standardized test scores, teacher recommendations, or some combination of these. (Haskins, Walden, and Ramey, 1983, p. 866)

intraclass ability grouping -- the assignment of children randomly to classrooms where they are organized into

groups by ability within the classroom. (Haskins, Walden, and Ramey, 1983, p. 866)

meta-analysis -- the statistical analysis of a large collection of results from individual studies for the purpose of integrating findings. (Kulik and Kulik, 1982, p. 619)

self-concept -- the individual's perception of himself as a person, which includes his abilities, appearance, performance in his job, and other phases of daily living. (Good, 1973, p. 524)

self-esteem -- the judgment and attitude an individual holds toward himself. (Good, 1973, p. 525)

self-fulfilling prophecy -- the idea that a teacher's perceptions of a pupil's academic ability will affect the manner in which (s)he behaves toward that student, which will in turn affect his academic and personal behavior. (Schuncke, 1978, p. 303)

tracking -- the practice of assigning students to separate classes on the basis of ability. (Good and Marshall, 1984, p. 15)

Publications Concerning the Effects of Ability Grouping on Students' Academic Achievement

Koontz, William F. "A Study of Achievement as a Function of Homogenous Grouping." Journal of Experimental Education 30 (December 1961): 249-53.

This paper summarized a study conducted to test whether pupils grouped homogeneously by ability would show greater achievement than heterogeneously grouped pupils. Five fourth grade classrooms made up the experimental group. These students were grouped homogeneously for reading, language and arithmetic and changed classes for these subjects when necessary. Instructional materials matched the level of ability of each class. The control group consisted of pupils from other fourth grade classes who matched the experimental group in each of the three areas. They received instruction in heterogeneous classrooms with fourth grade instructional material. Scores on the Iowa Tests of Basic Skills were used for ability grouping and to measure achievement at the end of the study. Analysis of the data showed that the control group's achievement in reading was significantly higher than that of the experimental group. Arithmetic achievement for the control group was also significantly higher than for the experimental group. These results were essentially the same for all levels. No significant difference was found between the two groups in language achievement. The author concluded that the results of this experiment failed to support homogeneous ability grouping. It was pointed out that human behavior variables in this study were not controlled and that this could have affected the results. Therefore, further research and more evidence was seen as necessary to resolve the ability grouping question.

Nichols, Nancy J. "Interclass Grouping for Reading Instruction: "Who Makes the Decisions and Why?" Educational Leadership 26 (March 1969): 588-92.

Interclass ability grouping for instruction in reading was the focal point of this study. Data for analysis were derived from a two year research project, in which the author had participated, whose purpose was to compare the effectiveness of three methods of teaching reading in second grade. From this data, four classrooms were identified which matched in terms of readiness and intelligence measure. Two of the classrooms were above average but equal in ability and two were below average but equal in ability. Students in one of the above average and one of the below average classes were grouped across classrooms for reading while their matching classes received reading instruction in their own self-contained classrooms. Comparison of achievement scores for the above average classrooms showed that the achievement of the self-contained classroom exceeded the interclass group in word meaning, paragraph meaning and word study skills. The below average self-contained classroom showed more achievement growth than the interclass group in word meaning, paragraph meaning, spelling and word study skills. The author concluded that interclass grouping for reading instruction did not benefit either the above average or below average classrooms.

Provus, M.M. "Ability Grouping in Arithmetic." Elementary School Journal 60 (April 1960): 391-98.

This article reported the results of a study which compared achievement in arithmetic classes grouped by ability to achievement in heterogeneously grouped arithmetic classes. Nineteen fourth, fifth, and sixth grade classrooms were included in the study; eleven were the experimental ability grouped classes while eight were the control group. The arithmetic concepts subtest of the Iowa Tests of Basic Skills was given as a power test, with no time limits, in order to place the children in the ability grouped classes. These scores were also used with the final test score to determine growth in achievement. It was hypothesized that children who were taught in the homogeneous ability grouped classrooms would learn more than children in the heterogeneous classrooms. Analysis of the data showed a significant difference between the growth scores of the experimental and control groups with the experimental group showing a greater gain than the control group. When comparisons were made among the various ability levels within the experimental and control groups, it was found that the high and average classes in the experimental group showed significant gains in achievement. However, the low group in the control classes showed a higher growth score than the experimental low group. It was concluded that slow students do not benefit from ability grouped classrooms while average and bright students do benefit. Results of a questionnaire administered to measure the effect of ability grouping on students' attitude toward mathematics were insignificant.

Leiter, Jeffrey. "Classroom Composition and Achievement Gains." Sociology of Education 56 (July 1983): 126-32.

This article presented results of a study to determine the effects of classroom composition on student achievement. Subjects for the study were 294 third grade children assigned to fifteen classrooms in six schools. Classroom assignments were made by the school district according to reading scores on a standardized test so that maximum homogeniety was achieved in each classroom. For this study, standardized test scores for both reading and mathematics at the beginning and at the end of third grade were compared. Three areas of ability composition of classrooms were examined: the homogeniety of ability in the classroom, the level of ability in the classroom, and the interaction between the two. Analysis of the data showed that the ability level of the classroom had a strong effect on achievement in mathematics, since those students with high ability classmates made greater gains in mathematics than those students with low ability classmates. Conversely, in reading achievement, the lower the ability level of the class, the greater were the gains. The other two areas, homogeniety of abilities and the interaction of ability level with homogeniety, had no significant effects on achievement gains in mathematics or reading. Implications of these findings and suggestions for further research were discussed.

Berkun, Mitchell M., Lloyd W. Swanson, and David M. Sawyer. "An Experiment on Homogeneous Grouping for Reading in Elementary Classes." The Journal of Educational Research 59 (May/June 1966): 413-14.

This article presented the results of an experiment performed in a California school district to compare and contrast reading achievement in homogeneously and heterogeneously grouped elementary classes. Eighteen homogeneous classrooms formed the experimental group while twenty-seven heterogeneous classes made up the control group. These groups represented third, fourth and fifth grades from five schools. The California Reading Test was used for initial grade placement in both the experimental and control classrooms in September. In April, another form of the test was given to determine any achievement gains. Results of the comparison showed that the homogeneously grouped classrooms gained a .4 year reading level ahead of the heterogeneously grouped classrooms. Moreover, the low ability group showed a .2 year advantage which the authors interpreted as showing that these children don't necessarily suffer from homogeneous ability grouping as other research has indicated. It was concluded that the homogeneous grouping benefited both groups.

Ekstrom, Ruth B. "Experimental Studies of Homogeneous Grouping: A Critical Review." School Review 69 (Summer 1961): 216-26.

Studies designed to determine the effect of homogeneous grouping of students for instruction on student achievement were the focus of this article. Only those studies that included a control group of equal ability but in heterogeneously grouped classes were reviewed. Results of these studies were mixed and at times contradictory. Ekstrom stated that this was due to tremendous variation in experimental conditions, methods and purposes. It was also pointed out that not enough variables were controlled and that often the experiments were not long enough to observe significant changes. Few studies provided for differentiation of course content or teaching methods and materials. Those that did, however, showed findings that favor homogeneous grouping.

Good, Thomas L. and Susan Marshall. "Do Students Learn More in Heterogeneous or Homogeneous Groups?" The Social Context of Instruction: Group Organization and Group Processes. Ed. Penelope L. Peterson, Louise Cherry Wilkinson, and Maureen Hallinan. Orlando: Academic Press, Inc., 1984. 15-38.

The purpose of this paper was to review research on ability grouping in order to compare the effects of homogeneous and heterogeneous grouping on student learning. The authors identified and discussed several factors which made it difficult to draw conclusions about ability grouping, including the fact that research varies a great deal in scope, purpose, sample and methodology. Studies which included observational data were summarized and reviewed. From these findings, it was concluded that grouping by ability for instruction is a questionable practice. It was suggested that future research take into account such variables as teacher effects, differences in students, structural settings and curriculum tasks.

Hallinan, Maureen R. and Aage B. Sorensen. "The Formation and Stability of Instructional Groups." American Sociological Review 48 (December 1983): 838-51.

It was the purpose of this study to examine what factors influence the formation of instructional groups within classrooms as well as the stability of these groups once formed. The authors held that in order for ability grouping to have positive effects on learning outcomes, that the groups be small in number of students and homogeneous in regard to ability, and that the number of groups formed reflect the variance of ability found in the classroom. Moreover, the groups formed should not be stable, but should change to accomodate students initially misplaced as well as students' differing learning rates. The authors contended that factors such as class size, ability distribution of the class, discipline, physical layout of the classroom, and teacher time prevent the formation of groups that will positively affect achievement. For the study 48 elementary classrooms ranging from third to sixth grades were chosen. These were self-contained classrooms where most were grouped for instruction in reading and math. Information on instructional groups was collected from the homeroom teacher which included names of students in each group, the basis for group assignment, the percent of instructional time each student spent in the group, and the ability level of the group. Standardized test scores provided information on student achievement. Analyses of the data collected showed that no matter what the distribution of achievement in a classroom, there was a tendency to form three instructional groups, fairly equal in size. These groups also varied in homogeniety of ability and achievement. Moreover, these groups remained stable throughout the school year, allowing for little mobility of students between groups. It was also found that classes grouped by ability in this study did not have a greater variance in achievement at the end of the year than those classes not ability grouped. However, further analysis showed that those groups that were more homogeneous in ability, showed a greater increase in variance in achievement for the class. Consequences of these findings for ability grouping and student achievement were discussed.

Dreeben, Robert. "First-Grade Reading Groups: Their Formation and Change." The Social Context of Instruction: Group Organization and Group Processes. Ed. Penelope L. Peterson, Louise Cherry Wilkinson, and Maureen Hallinan. Orlando: Academic Press, Inc., 1984. 69-83.

This article represented a reanalysis of an earlier study on grouping and instructional pacing in first grade reading. Data analyzed were collected from 147 first graders from 15 classrooms in 6 schools who were grouped into a maximum of 43 instructional groups for reading. It was the intent of the analysis to discover how groups were formed and how they changed over the school year, not to test an hypothesis. Data was analyzed in terms of the number of groups formed, the size of groups and the discreteness, or the extent to which aptitudes do not overlap across group boundaries. Analysis showed that the number of instructional groups formed in the classrooms studied were significantly affected by class size and the number of low-aptitude pupils. The number of low-aptitude pupils also affected the size of the groups formed. The composition of the class was also related to group discreteness as well as to group means. The groups formed were not static but changed in number, size and membership over the year. In addition, it was found that the grouping arrangement established at the beginning of the year influenced the changes in groups later on in the year. Dreeben concluded that grouping had a direct impact on instruction but an indirect influence on learning, since learning is mediated by teachers' instructional differences, materials and use of time.

Alpert, Judith L. "Teacher Behavior Across Ability Groups: A Consideration of the Mediation of Pygmalion Effects." Journal of Educational Psychology 66 (1974): 348-53.

This article presented the results of a study undertaken to determine whether teachers use more "good" behaviors--those behaviors judged by experts to increase students' reading performance --with high ability or low ability reading groups. Specifically the study was undertaken in response to other investigations which found that teacher expectations affect student growth in achievement and that students in low ability groups receive less positive and more negative interactions with their teachers and have less opportunity to respond to the teacher in the classroom. Fifteen second grade classes, grouped randomly into classrooms and by ability for reading, were observed and tape recorded. Data on "good" teacher behaviors were collected on the high and low ability groups and compared. Results showed that teachers treated both groups equally in amount and quality of reading group time, reading group materials used, and good verbal behaviors. Moreover, the bottom reading groups received preferential treatment since they had less members. It was concluded that teacher expectations do not necessarily cause negative teacher behaviors or poor academic performance of low ability groups.

Eder, Donna. "Ability Grouping as a Self-Fulfilling Prophecy: A Micro-Analysis of Teacher-Student Interaction." Sociology of Education 54 (July 1981): 151-62

The purpose of this study was to identify and examine the differences in learning contexts of four reading ability groups in a first grade classroom. Direct observation, interviews and videotapes were used to collect data over one school year on student and teacher interactions. Differences in behavior across group levels as well as frequency of behavior were identified in the data analyses. It was found that children in the two low groups were significantly more inattentive than children in the two high groups. There was twice as much teacher management behavior in the low groups as in the high groups. The lower groups also experienced significantly more reading turn disruptions than the higher groups. The lower groups' performance on a reading achievement test was significantly lower and members of these groups were perceived by their teachers as having low reading ability. The findings of this investigation were compared to other ability grouping research. Implications of these results for ability grouping as a vehicle for the self-fulfilling prophecy were also discussed. It was concluded that ability grouping for instruction is a questionable practice, especially for low ability students.

Hiebert, Elfrieda H. "An Examination of Ability Grouping for Reading Instruction." Reading Research Quarterly 18 (Winter 1983): 231-55.

This article provided a review of research concerning ability grouping for purposes of reading instruction, focusing on what is known about the nature of processes within these ability groups and how these processes affect children's reading development. It was pointed out that research suggests that the experiences of members in the high-ability group can be very different from those of low-ability group members and that these differences may in turn affect the learning outcomes of students. Findings concerning allocation of time and interaction patterns in high and low ability groups were reviewed. Allocation of time studies included allocation of teacher time to each group, allocation of instructional time to different tasks within groups, time-on-task by group members, and the match between learning rates and pacing. Studies dealing with interaction patterns included questioning strategies, teacher reinforcement, teacher responses to reading miscues, other students' responses to reading miscues, interruptions of group time, information concerning group time, and information concerning reading group status conveyed to the classroom by the teacher. Implications of these findings on learning outcomes in reading as well as areas which need further and more conclusive research were identified.

Haskins, Ron, Tedra Walden and Craig T. Ramey. "Teacher and Student Behavior in High- and Low- Ability Groups." Journal of Educational Psychology 75 (Dec. 1983.): 865-76.

The purpose of this study was to examine the differences in behaviors of both teachers and students in high ability and low ability groups with the general intent to determine if ability grouping negatively affects academic achievement in minority and low-income students. Teacher interviews and observations were conducted in 19 heterogeneous, primary-grade classrooms which were ability grouped within the classroom for reading instruction. Analysis of the data revealed the following results: 1. children in the high groups were more often involved in working independently while low group children usually were instructed in a group; 2. low group children received more drill, error corrections, control statements and positive reinforcement; 3. low-ability children received more direct instruction; 4. low group children were disruptive and off-task more often. Comparing these findings with results of other research, the authors concluded that the instructional setting and teacher behaviors for the low-ability group were appropriate for the behavior and intellectual characteristics displayed by those children. They also concluded that ability grouping within the classroom does not contribute to poor academic development of low-income and minority-group students.

Publications Concerning the Effects of Ability Grouping

on Students' Affective Development

Fagan, Michael J. "Self-Concept and Academic Achievement: Their Relationship Within and Between Streamed Classes." Humanist Educator 19 (December 1980): 91-96.

The purpose of this study was to determine whether a student's academic standing within a classroom, or his academic standing between classrooms has more impact on his self-concept. The hypothesis tested by the study stated that "where assignment to classes is based on academic performance, the academic achievement/self-concept relationship is more manifest between classes than within classes" (p. 92). Subjects for the study were 145 students from two fourth grade and two fifth grade classrooms. The high and average classes were chosen from each grade level. A composite achievement score from a standardized test and a score on a self-report inventory were determined for each student and analyses were performed both between classrooms and within classrooms. Results indicated a significant difference in self-concept scores between the average and high classrooms in each grade. Within classroom comparisons did not reach significance. It was concluded that students' compare the level of the class to which they are assigned to the level of class to which their peers are assigned; a favorable comparison results in a positive effect on self-concept, while an unfavorable comparison produces a negative effect. Because of the possible negative effects on students' self-concepts, homogeneous ability grouping was questioned.

Mann, Maxine. "What Does Ability Grouping Do to the Self-Concept?" Childhood Education 36 (1960) 356-60.

In this article, Mann presented the results of a study she conducted to assess the effect of ability grouping on the self-concept. The study involved 102 fifth grade children who had been grouped by ability into four sections since entering first grade. Each section was identified only by the teacher's name. A group questionnaire, consisting of five questions, was used to collect data to determine how the children saw themselves in ability grouping. Three of the questions served to disguise the purpose of the study, while two were designed to obtain the information. Results of the study were as follows: 1. When asked "which fifth grade are you in?" over two-thirds of the highest and lowest groups identified their group in terms of ability, not by the teacher's name. 2. When asked "why do you happen to be in this particular fifth grade group?" there were no negative responses in the two high groups and only negative responses in the lowest group. Mann concluded that the negative attitudes expressed by the low group in her study showed that ability grouping as a means to provide for individual differences in academic ability needs to be reexamined.

Byers, Loretta. "Ability Grouping--Help or Hindrance to Social and Emotional Growth?" School Review (Winter 1961): 449-55.

This article presented a survey of research findings that focused on the effects of ability grouping on the social and emotional growth of gifted students. Two types of grouping were identified: partial segregation of the gifted where part of the school day was spent in special, homogeneous classes and the rest spent with other children in regular classes; and total segregation where the gifted spent all of the school day in special classes. The studies concerning partial segregation found that gifted students tended to benefit emotionally by this arrangement. It was also found that students tended to make friends within their own ability groups. Total segregation studies found that students in gifted classes felt more secure in homogeneous classes and that these children seemed to gain in popularity and prestige, creating a halo effect for those in the gifted class. It was also noted that children who were not in the gifted program felt unworthy and sometimes rejected. Byers concluded that more comprehensive research of the total effects of ability grouping on self-concept, emotional growth and stratification in peer groups needs to be performed.

Kibby, Michael W. "The Status and the Attitudes of Homogeneously Grouped Second-Graders: An Exploratory Study." The Elementary School Journal 78 (September 1977): 13-21.

This experiment studied the effects of students' status within reading groups on the formation of attitudes toward reading. It was the premise of the study that a student's concept of himself as a reader as well as his attitudes toward reading, are based on his status as a reader within his reading group, not on his actual reading ability. Subjects for the study were chosen from two of four second grade classrooms which were homogeneously grouped. Six of the poorest readers from the classroom with the highest achievers and five of the best readers from the classroom with the lowest achievers were selected for comparison. Data were collected through an attitude inventory, observed classroom behaviors, a self-concept inventory and an interview. This study found that the high achievers had a more negative attitude towards reading than the low achievers. High achievers also revealed more negative self-concepts and exhibited more negative behaviors than low achievers. The low achievers, who were actually poor readers, demonstrated positive attitudes, behaviors and self-concepts. It was concluded that the negative attitudes, behaviors, and self-concepts of the high achievers resulted from having low status within their classroom. Implications of these findings for homogeneous grouping was discussed.

Haller, Emil J. and Sharon A. Davis. "Does Socioeconomic Status Bias the Assignment of Elementary School Students to Reading Groups?" American Educational Research Journal 17 (Winter 1980): 409-18.

This article summarized results of a study designed to assess what role socioeconomic status (SES) has in determining assignments of students to reading groups within classrooms. The study focused on three areas for assessment: the role of SES and reading achievement as determinants of group assignments; a comparison of SES segregation resulting from teacher judgments in grouping students, with SES segregation that would result using only standardized test results as a basis for grouping; and the relationship of the teachers' SES background to the degree of SES segregation in the classrooms. Data for the study were collected from a sample of 963 children from 37 fourth, fifth and sixth grade classes from schools in communities with wide variations in SES but not in race. Percentile scores on reading comprehension for the Iowa Test of Basic Skills and measures of family SES were collected. Teacher interviews provided information on group assignments and teachers' SES backgrounds. From this study, it was determined that reading achievement was a much greater determiner of reading group assignment than parental socioeconomic status. It was also found that grouping based on teacher judgment produced more SES segregation that grouping based on achievement tests alone. Finally, the teachers' SES background did not show a significant relationship to the amount of SES segregation in their classrooms. The authors concluded that neither student nor teacher SES plays a major role in making ability group assignments for reading.

Sorensen, Aage B. and Maureen Hallinan. "Effects of Race on Assignment to Ability Groups." The Social Context of Instruction: Group Organization and Group Processes. Ed. Penelope L. Peterson, Louise Cherry Wilkinson, and Maureen Hallinan. Orlando: Academic Press, Inc., 1984. 85-103.

This paper presented results of a study to determine the effect of race on ability group assignment within the classroom. The focus of the study was on the role of classroom composition and the relative sizes of the instructional groups in making group assignments. Data for the study were obtained from 759 students in 31 classrooms, representing fourth through seventh grades, who were ability grouped within their classrooms for reading. Information was collected from the teachers six times during the year, including the names of the students in each instructional group, the basis for forming the groups and percent of instructional time spent with each group. Analysis of the data, controlling for achievement, was performed on both the individual and classroom levels. Results revealed two indirect effects of race: race does affect the way teachers organize instructional groups as well as the criteria they use for assignment. However, no evidence was found that race was overtly a criterion for assignment to an ability group. The authors concluded that exclusive of reading achievement and classroom composition and size, race had no effect on ability group assignment.

Felmlee, Diane and Donna Eder. "Contextual Effects in the Classroom: The Impact of Ability Groups on Student Attention." Sociology of Education 56 (April 1983): 77-87.

The purpose of this study was to determine the effect of students' ability group assignment on their rate of becoming inattentive. The study focused on a first grade classroom with 23 students assigned to four ability groups for reading. Data was collected from sixteen video-taped reading lessons, four from each group. Focus of the analysis was on the rate of change from the state of attention to the state of inattention. Looking at what was being read or taught was considered to be attentive behavior. Individual characteristics such as reading aptitude and maturity level were controlled for in order to test for group effects. Analysis of the data showed that individual characteristics variables had no statistically significant effects, while each of the three group level variables had a "significant and substantial" (p.82) independent effect. Group ability level had the greatest effect on attention shifts. It was found that students in the higher ability groups had a lower rate of becoming inattentive than those in lower groups. Reading length had a positive effect in that the longer reading turns produced more inattention. Reading errors had a negative effect: they reduced inattention by serving as reminders of the reading task. These effects were also shown to become stronger over time. The authors concluded that since students assigned to low ability groups are more likely to become inattentive, these students are not being exposed to a positive learning environment and are thus at a disadvantage. They also concluded that further research focus on how group contexts affect individual behavior.

Eder, Donna. "Ability Grouping and Students' Academic Self-Concepts: A Case Study." Elementary School Journal 84 (Nov. 1983): 149-61.

In this study, the author attempted to identify and examine the processes involved as students, who are grouped by ability, form self-concepts of their academic ability. Using direct observation, video-tapes and interviews, data were collected on a first grade class, which was ability grouped for reading only, over an entire academic year. From this data, the author was able to identify several processes which were involved as students formed self-concepts of their abiltiy. Factors such as whether or not the child is aware of differences in ability of the groups, to what degree the child compares himself with other children in the same group, whether the child is aware of how different groups are ranked, and how the teacher perceives the child's ability were identified. It was also noted that while these processes were identifiable and apparent, their influence on self-esteem was also complex and sometimes conflicting. Eder concluded that though the results of this study can't be generalized, these processes may be important in other classrooms, and that more studies on larger samples and at different grade levels should be undertaken.

Schuncke, George M. "Social Effects of Classroom Organization." Journal of Educational Research 71 (July/August 1978): 303-7.

The purpose of this study was to examine how three types of classroom organization affect the social status of elementary students. Classroom organization was interpreted as a manifestation of teacher expectancy, while social status was defined as how students are perceived by their classmates. The three types of classroom organization identified were in-class ability grouping for instruction, cross-grouping between classrooms according to ability, and individualized instruction based on diagnostic measures. The experiment focused on three areas of social structure: how each student was perceived according to ability and achievement; how well the student was liked; and how much social power the student was accorded. Data on these three areas were collected from 18 fifth and sixth grade classrooms. Analysis of the data revealed that in all three classroom organizations, there was a strong agreement between how teachers perceive boys' academic ability and how classmates accord academic status. However, it was only in the within-class ability grouped classrooms that teachers' perception of boys' academic ability affected how well they were liked and how much social power was accorded them. The author concluded that within-class ability grouping had significant effect on the social status of fifth and sixth grade boys.

Hallinan, Maureen T. and Aage B. Sorensen. "Ability Grouping and Student Friendships." American Educational Research Journal 22 (Winter 1985): 485-99.

The focus of this study was on how ability grouping children for instruction affects their friendship choices. Data were collected on students in 104 reading ability groups from 32 classes in 10 elementary schools. The reading teachers provided information on the instructional groups and information on friendships was collected from the children at six times during the school year. Three types of analysis were used to assess the data to determine the relationship between friendship choices and ability group membership. Three findings were drawn from these analyses: children made more best friend choices within their ability group than outside it; as the school year progressed, the overlap between a student's friendship clique and members of his ability group increased; membership in the same ability group had a positive effect on best friendships being formed between two children. Explanations for why ability grouping affects friendship choices and its impact on students' social development were discussed. Both positive and negative implications of these findings were included.

Publications Concerning the Effects

of Ability Grouping on Students' Academic

Achievement and Affective Development

Goldberg, Miriam, A.Harry Passow and Joseph Justman. The Effects of Ability Grouping. New York: Teachers College Press, 1966.

This book presented results of a two year study of intermediate grade children grouped by ability in classes with various ranges of ability. The study was undertaken to assess the effects of ability grouping on the children's academic achievement, self-concepts, attitudes toward school and attitudes toward more or less able classmates. Data on how ability grouping affects teachers' rating of students were also collected. IQ scores were used to group students into five ability levels, and fifteen different patterns for classroom arrangement were generated. The resulting classes were kept intact from the beginning of fifth grade to the end of sixth. 2,219 children were included in the study and were tested in each area covered by the study at the beginning of grade five and again at the end of grade six. Analyses were based on the differences between these two scores. The null hypothesis tested by this study held that "neither the presence nor the absence of gifted or slow pupils, nor the range of abilities in any given classroom, nor the relative position of a particular ability level within the range will affect the attainment of elementary school pupils" (p. 24). Analyses of the data were performed in terms of the null hypothesis and results for each of the five areas were presented and discussed in detail. From these findings, the authors concluded that narrowing the range of abilities in the classroom did not necessarily increase academic achievement for any ability level. In addition, no evidence was found that ability grouping had negative effects on self-concept, school attitudes and other nonacademic areas.

Borg, W. R. Ability Grouping in the Public Schools. Madison, Wi.: Dembar Education Research Series, 1966.

This book described an extensive four year research project that involved 4000 school children in Utah, representing fourth, sixth, seventh, eighth, and ninth grades. The goal of the study was to compare the effects of ability grouping students for instruction with the effects of randomly grouping students for instruction. Effects of these two grouping systems on general achievement, overachievers and underachievers, study methods, social adjustment, attitudes toward school, problems, self-concept, and personality were measured. Three types of comparisons were made: 1. between students of the same sex and same ability in the two grouping systems; 2. between students of the same sex and in the same grouping system but of different levels of ability; 3. between boys and girls at the same ability level and in the same grouping system. Analysis of the data for the elementary grades produced the following results: 1. Superior students tended to make significant gains in ability grouped classes while slow students tended to do better in random grouping situations; average students did not favor either ability grouping or random grouping. 2. Superior students in the ability grouped classrooms had more overachievers and less underachievers than those in the randomly grouped classrooms; no significant differences were found in comparisons of average or slow students in the two grouping systems. 3. Those students in the randomly grouped classrooms developed better study habits. 4. Average and slow students in the ability group system gained more social status than the randomly grouped students of comparable ability. 5. Ability grouped superior and slow students showed a more favorable attitude toward the teacher; ability grouped slow boys had a more favorable attitude toward school; no significant differences were found in attitude toward peers. 6. Those students at all ability levels in the randomly grouped classrooms had better self-concepts and higher self-acceptance than those in ability grouped classrooms; discrepancy scores--the difference between the student's self-concept and ideal self--were also lower for ability grouped students. 7. Ramdomly grouped students showed a greater feeling of belonging and less anti-social tendencies than ability grouped students; other personality differences were not statistically significant.

Findley, Warren G. and Miriam M. Bryan. The Pros and Cons of Ability Grouping. Fastback No. 66. Bloomington, In.: Phi Delta Kappa Foundation, 1975.

This fastback was an update of a report investigated and prepared by the authors for the U.S. Office of Education on the status of ability grouping from 1920 to 1970. The focus of this report was on grouping children for instruction by ability across classrooms. Content was derived from published research and responses to surveys concerning current ability grouping practices. The report was given in three parts. The first part defined ability grouping and delineated the various ways it is practiced in both elementary and secondary schools. The second part set forth conclusions concerning the extent and acceptance of ability grouping in schools; the effects of ability grouping on achievement and affective development; and its effects on promoting ethnic and socioeconomic separation. The third part outlined ten recommendations based on the conclusions which offered alternatives to the practice of interclass ability grouping.

Abadzi, Helen. "Ability Grouping Effects on Academic Achievement and Self-Esteem in a Southwestern School District." Journal of Educational Research 77 (May/June 1984): 287-92.

In this article, Abadzi presented results of a study she performed to assess the effects of ability grouping on academic achievement and self-esteem. Her subjects were fourth grade children who were grouped by ability in reading, language, mathematics and science but mixed in other subjects. A cutoff score on the Iowa Test of Basic Skills was used to determine the placement of students in high or regular ability classes. In the study, ITBS scores before and after ability grouping were compared to assess academic achievement while the Self Esteem Inventory was used for the self-esteem scale. Results of the analysis showed that standardized test scores of students of high ability increased significantly after a year. Scores of those students who had scored a little above the cutoff score showed performance increase while those who had scored a little below the cutoff showed a decrease. No significant differences were found in self-esteem assessment. Because of the questionable practice of using a single criterion for group assignment, the low number of minority students placed in the high ability group, and recommendations of researchers, the school replaced this program with a more flexible subject by subject within-class grouping system.

Hallinan, Maureen. "Summary and Implications." The Social Context of Instruction: Group Organization and Group Processes. Ed. Penelope L. Peterson, Louise Cherry Wilkinson, and Maureen Hallinan. Orlando: Academic Press, Inc., 1984. 229-239.

The Social Context of Instruction: Group Organization and Group Processes presented a collection of papers dealing with instructional grouping in American classrooms. The papers covered a variety of issues, including grouping practices and group processes and their effect on student achievement. Hallinan, in the final chapter, summarized the papers and identified six generalizations about instructional grouping and its effects:

1. The most common basis for instructional grouping is student ability.
2. In practice, the assignment of students to tracks or within-class ability groups is, to a large extent, independent of individual students' ability or academic achievement.
3. The mode of instruction differs across tracks and ability groups.
4. Behavioral processes differ across and within tracks and ability groups.
5. Student social status differs across and within tracks and ability groups.
6. Tracking and ability grouping are deterrents to learning for students assigned to low groups.

Implications for future research, based on these generalizations, were discussed as were practical suggestions for classroom teachers.

Riccio, L. Lawrence. "Facts and Issues About Ability Grouping." Contemporary Education 57 (Fall 1985): 26-30.

The purpose of this article was to examine the issues surrounding ability grouping as delineated by research, and to offer suggestions for minimizing those negative effects often associated with ability grouping. The issues reviewed included the criteria for assigning students to ability groups; the effects of ability grouping on educational achievement and opportunity; the effects of ability grouping on students' self-concept, behavior and attitudes; and considerations involving race and ethnicity. The author presented recommendations and guidelines for implementing ability grouping in such a way that the negative effects would be minimized and student achievement enhanced.

Kulik, Chen-Lin C. and James A. Kulik. "Effects of Ability Grouping on Elementary School Pupils: A Meta-Analysis." Paper presented at the Annual Meeting of the American Psychological Association. Toronto, Ontario, Canada. August, 1984. (ERIC Document Reproduction Service Number ED 255 329.)

The purpose of this paper was to apply a quantitative approach, known as meta-analysis to 31 separate studies dealing with the effects of ability grouping on elementary students. The 31 studies dealt only with those programs where students in certain grades were divided into classes of different ability levels within the school. These studies focused on the effects of grouping on student achievement and student self-concept. Results of the analysis revealed that in studies of programs for gifted students, achievement test scores were raised by .49 standard deviations; in regular programs, .07 standard deviations. The average effect was to raise test scores by .19 standard deviations. The average effect of grouping on self-concept was a reduction in self-esteem by .06 standard deviations. The authors concluded that in general, students gained more from grouped classes than they did from ungrouped classes with gifted students especially benefitting. It was also concluded that effects of grouping on self-concept were insignificant.

Kulik, Chen-Lin C. "Effects of Inter-Class Ability Grouping on Achievement and Self-Esteem." Paper presented at the Annual Convention of the American Psychological Association. Los Angeles, California. August, 1985. (ERIC Document Reproduction Service Number ED 263 492.)

The study reported in this paper was a follow up to a study performed earlier by Kulik and Kulik (1982) and was designed to correct deficiencies which had been detected in the earlier study. That study had been criticized for including too many studies without sufficient experimental controls and for failing to investigate possible differential effects of ability levels on self-esteem. In this experiment, forty-five studies on the secondary level and forty on the elementary level met the necessary criteria to correct these deficiencies. As in the earlier study, meta-analysis was the method used to process the data. Results of the meta-analysis supported the earlier findings. Interclass ability grouping had a significant effect on the achievement of students in honors programs and little effect on their self-esteem. No effect on achievement or self-esteem was evident for average students. There was a small positive effect on achievement and self-esteem for slow learners.

Esposito, Dominick. "Homogeneous and Heterogeneous Ability Grouping: Principal Findings and Implications for Evaluating and Designing More Effective Educational Environments." Review of Educational Research 43 (1973): 163-79.

The purpose of this article was to summarize the results of research concerning ability grouping and to relate these findings to the evaluation and designing of more effective environments for the teaching-learning process. Findings in three areas were reviewed: research concerning ability grouping and academic achievement; ability grouping and affective development; and how ethnic and socioeconomic variables influence the placement of students in ability groups. Research findings were summarized as follows: 1. ability grouping does not have a consistent positive effect on student achievement; 2. ability grouping has an unfavorable impact on affective development; 3. ability grouping not only separates students according to performance on standardized tests but also according to ethnic and socioeconomic status. The author pointed out that those studies which report favorable results on achievement and affective development fail to take into consideration other variables, such as teaching methods, which may actually be the cause of the academic improvement or personal growth. It was concluded that research should shift emphasis to those educational systems which focus on the achievement of educational outcomes for individual children, not groups.

Winn, Wynona and Alfred P. Wilson. "The Affect and Effect of Ability Grouping." Contemporary Education 54 (Winter 1983):119-25

This article reviewed research that had been performed on both the elementary and secondary school levels. Areas focused on included criteria for placing children in ability groups; processes involved in teaching children grouped by ability; the effects of ability grouping on student achievement; and the effect of ability grouping on self-concept and teacher expectations. It was found that criteria for placing students in ability groups were questionable and that once placed they were seldom moved from that group. It was also found that the teacher-student interaction, type and level of instruction and materials used varied in such a way to disadvantage the low ability group. Moreover, although slight achievement gains could be shown for high ability groups, this was offset by losses by the low and average groups. Effects of ability grouping on self-esteem were mixed though the majority of research showed negative effects on the low ability group. Ability grouping also affected teacher expectations manifested in poor performance and attitudes of the low ability group. The authors concluded that research does not support ability grouping in either elementary or secondary schools.

Weinstein, Rhona Strasberg. "Reading Group Membership in First Grade: Teacher Behaviors and Pupil Experience Over Time." Journal of Educational Psychology 68 (1976): 103-16.

In this extensive study, three heterogeneously grouped first grade classrooms in a primary school were observed over the first five months of school to examine the initial formation of reading groups within each classroom and to determine the effect of these ability groupings on pupil mobility between groups, patterns of interaction between teacher and child, student achievement in reading and other related areas such as sociometric status, self-esteem and test anxiety. Data were collected through classroom observations, student interviews, the Lee-Clark Reading Test Series, Coopersmith Self-Esteem Inventory, and the Sarason Test Anxiety Scale for Children. Analysis of the data provided the following results: 1. reading group membership evolved and changed during the first month of school but then became relatively stable; 2. teacher-student interaction revealed more favorable feed-back to the low-ability group; 3. reading group membership contributed a 25.1% increment, over and above the initial reading readiness tests, to the prediction of student achievement. Moreover, as the year progressed, the gap between achievement in the high ability group and low ability group widened. Findings on sociometric status, self-esteem and test anxiety were non-significant. Additional qualitative evidence was analyzed concerning the way in which teacher expectations affect pupil achievement within ability groups. It was suggested that individual student perceptions of different kinds of teacher feedback may help researchers determine how teacher expectations are conveyed in the classroom.

SUMMARY

Research concerning grouping students by ability for instructional purposes, and its effects on their academic achievement has produced varied and sometimes conflicting results.

In their studies of the effects of interclass ability grouping on student achievement, Koontz (1961) and Nichols (1969) found that students grouped homogeneously for reading, language and arithmetic showed no significant gain in achievement scores. Moreover, the heterogeneously grouped students in these studies showed significant growth in achievement in reading and arithmetic when compared to the homogeneously grouped students. Goldberg, Passow and Justman (1966) also concluded that ability grouping did not increase academic achievement for any ability level.

Conversely, Provus (1960) found that the bright and average students showed significant gains in arithmetic achievement in ability grouped classes while low ability students fared better in heterogeneous classes. Similar findings were reported by Borg (1966), Findley and Bryan (1975), Abadzi (1984), Hallinan (1984), and Riccio (1985).

Leiter (1983) also found that homogeneously grouped high ability math students made greater gains than low ability students. However, he also reported that in reading, those students in the low ability classes showed greater gains than those in the high ability classes. Berkun, Swanson, and Sawyer (1966) reported achievement gains in reading for both the high and low groups, a finding supported by Kulik and Kulik's (1984), 1985) meta-analysis.

In her review of research on interclass ability grouping, Ekstrom (1961) found that the research she reviewed supported homogeneous ability grouping when course content, teacher methods and materials were enriched. On the other hand, Esposito (1973), Winn and Wilson (1983) and Good and Marshall (1984) concluded that there was no evidence that ability grouping positively affects student achievement. In addition, these authors, like Ekstrom, pointed out the discrepancies in methodology, purposes, and controls among the various studies reviewed. They also stated the need for further research that would take into account such variables as teacher and student differences, teaching methods and materials, and learning environment, and how these variables affect student achievement.

Of these researchers, whose studies were designed to determine the effects of interclass ability grouping on student achievement, only Berkun et al. and Kulik and Kulik concluded that homogeneous ability grouping is a beneficial, educational practice. Other researchers either questioned the practice or stated the need for further evidence of positive effects on student achievement.

In their study of intraclass ability grouping, Hallinan and Sorensen (1983) found that there was no significant difference in academic achievement between classes with ability grouping and classes without ability grouping. However, they were able to identify factors in the classroom which placed constraints on the formation of small homogeneous ability groups and which, in turn, hindered growth in academic achievement. They also found that those groups which were more homogeneous in ability showed a greater increase in class var-

iance in achievement. Dreeben (1984) identified similar constraints on the formation of ability groups. However, unlike Hallinan and Sorensen, he found that, over time, the groups changed in number, size and membership. Dreeben also suggested that teachers' instructional methods and use of time and materials have a greater effect on pupil achievement than grouping methods.

Studies by Alpert (1974) and Eder (1981) were concerned with whether ability grouping affects teacher expectations, and becomes a self-fulling prophecy for pupil achievement. Alpert found that the high and low ability groups in her study were treated equally in amount and quality of reading time, materials and positive verbal behaviors. She concluded that the low achievement of the low ability groups did not result from negative learning experiences of the low groups. Eder, on the other hand, found that the learning experiences of the children in the low ability groups in her study differed significantly from those of the children in the high ability groups. She found that the greater degree of inattention, the greater amount of teacher management behaviors, and the greater number of reading turn disruptions, experienced by children in the low ability groups, contributed to lower reading achievement.

In her study, Weinstein (1976) found that reading group membership contributed to the prediction of student achievement and that the gap in achievement between the high and low group widened as the year progressed. These findings were supported by Hiebert (1983) in her review of research regarding within-class ability grouping for reading instruction.

Haskins, Walden and Ramey (1983) also reported discrepancies between the learning experiences of high and low groups. However, they concluded that the instructional setting and methods used by the teachers for the low group were appropriate and necessary for positive learning outcomes. They also found that the low group received more positive reinforcement than the high group, a finding supported by Weinstein (1976).

While only one of these researchers, Eder, questioned the practice of within-class ability grouping for instruction, all noted the importance of recognizing and dealing with those factors and processes in ability grouped classrooms which can hinder positive effects on student achievement.

Studies concerning grouping students by ability for instructional purposes, and its effects on their affective development have also resulted in diverse findings.

In his study of the effects of interclass ability grouping on self-concept, Fagan (1980) found that ability grouping positively affected the self-esteem of students in the higher ability groups but produced a negative effect on students' self-concepts in the lower groups. Similar findings were reported by Mann (1960), Byers (1961), Esposito (1973), Findley and Bryan (1975), Winn and Wilson, (1983) and Riccio (1985).

Kibby (1977), on the other hand, concluded that negative attitudes, behaviors and self-concepts demonstrated by the students in his study, resulted from the students' status within their ability group, not on their membership in a particular ability group.

Borg (1966) found that students at all ability levels in the randomly grouped classrooms had better self-concepts and higher self-acceptance than those in ability grouped classrooms. However, Goldberg, Passow and Justman (1966), Abadzi (1984) and Kulik and Kulik (1984,1985) found no significant effects of ability grouping on self-concept.

Borg (1966) reported that ability grouped average and slow students gained more social status than randomly grouped students of comparable ability, but he also stated that, in general, randomly grouped students showed a greater feeling of belonging and less anti-social behaviors than ability grouped students. Hallinan (1984) reported that recent research showed that students in high ability groups were more popular and had higher social status than students in low ability groups.

Findley and Bryan (1975) and Esposito (1973) reported that students from minority groups and with low socioeconomic status, tended to be over-represented in low ability groups, a finding supported by Riccio (1985). All three researchers expressed concern that homogeneous ability grouping across classrooms promoted separation along ethnic and socioeconomic lines.

Moreover, Findley and Bryan (1975), Winn and Wilson (1983), Hallinan (1984), and Abadzi (1984) strongly questioned the validity of the criteria for initial placement of students in ability groups. Findley and Bryan and Winn and Wilson also reported that ability group assignment was usually permanent and that once assigned there was little opportunity for a student to move out of a group.

On the other hand, in their study of intraclass ability grouping, Haller and Davis (1980) found that neither teachers' nor students' socioeconomic status affected the assignment of students to ability groups in reading. Similarly, findings from Sorensen and Hallinan's (1984) study of within-class ability grouping indicated that race had no significant effect on ability group assignment.

Felmlee and Eder (1983) reported that ability grouping had a significant effect on students' attention shifts, with students in the higher ability groups having a lower rate of inattention than students in the lower group. Eder (1983) was also able to identify several processes at work in the classroom, ability grouped for reading instruction, which affected the students' concepts of their academic ability.

Weinstein (1976) found that within-class ability grouping had no significant effect on students' sociometric status, self-esteem or test anxiety. Shuncke (1978), however, found that within-class ability grouping had a significant effect on the social status of boys in his study, manifested in how well they were liked and how much social power was accorded them.

In another study, Hallinan and Sorensen (1985) showed that ability group membership positively affected friendship choices of elementary students. They found that within-class ability grouping placed constraints on interactions with nongroup members while facilitating contacts with members of the same group, thus promoting friendships between group members.

CONCLUSIONS

Clearly, research concerning ability grouping for instruction has left many unanswered questions. Administrators and teachers can find research to justify and support almost any method by which they might wish to organize their schools and classrooms. Notwithstanding the inconsistencies of the research, some general statements can be made regarding the effects of ability grouping on student achievement and affective development.

The majority of the studies regarding the effects of interclass ability grouping on elementary students found that students in the high ability groups made significant gains in achievement while those in the low groups either made no gains or were negatively affected. Many studies also found that interclass ability grouping not only had a negative effect on the self-esteem of students in the low ability groups, but that ability grouping also tended to separate children along ethnic and socioeconomic lines. The majority of researchers concluded that interclass ability grouping is a questionable instructional practice. As Winn and Wilson (1983) pointed out in their article, ". . . the slight gains made by the high ability groups are offset by substantial losses by the average and low ability groups" (p.121).

Conversely, researchers supported intraclass ability grouping for instruction but identified aspects of ability grouping which could have negative effects on learning outcomes. These included constraints that can prevent the formation of truly homogeneous groups as well as differential treatment and experiences of high and low ability groups.

The findings regarding the effects of within-class ability grouping on students' affective development were inconclusive. Although researchers reported significant findings regarding several aspects of students' affective development, further research is necessary to substantiate these results.

RECOMMENDATIONS

Based upon the research reported in this study, it is recommended that:

1. Elementary students be assigned to classrooms that are heterogeneous in ability.
2. Small, homogeneous groups that reflect the true range of ability in the classroom be formed for instruction in each subject.
3. Placement in each instructional group be based upon several criteria, including achievement tests, diagnostic measures, classroom performance and teacher judgment.
4. Membership in an instructional group be flexible with provisions for reevaluation at regular intervals.
5. Teaching materials and instructional methods be carefully selected to meet the needs of individual children within each instructional group.
6. College courses for undergraduate and graduate education majors be designed to include current information concerning the impact of ability grouping on elementary children.

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